

**SOLAR CELL ASSEMBLY FOR USE IN AN OUTER SPACE ENVIRONMENT
OR A NON-EARTH ENVIRONMENT**

ABSTRACT

[0058] A solar cell assembly for use in an outer space environment or a non-Earth environment is provided. The solar cell assembly includes a photovoltaic conversion layer configured to produce an electrical current when receiving photons. The photovoltaic conversion layer has a top surface and a bottom surface. The solar cell assembly further includes a first electrical contact layer electrically coupled to the top surface and a second electrical contact layer electrically coupled to the bottom surface. Finally, the solar cell assembly includes a transparent electrically conductive layer disposed proximate said first electrical contact layer configured to receive electrons from an outer space environment and to conduct said electrons away from said photovoltaic conversion layer.